

# PATENT COOPERATION TREATY

## PCT

### INTERNATIONAL PRELIMINARY REPORT ON PATENTABILITY

(Chapter II of the Patent Cooperation Treaty)

(PCT Article 36 and Rule 70)

|       |             |
|-------|-------------|
| REC'D | 07 NOV 2005 |
| WIPO  | PCT         |

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|---|---|--|
| Applicant's or agent's file reference<br>FNTYA025WO   | FOR FURTHER ACTION<br><br>See Form PCT/IPEA/416                               |  |
| International application No.<br>PCT/JP2004/011004  | International filing date (day/month/year)<br>26.07.2004                      | Priority date (day/month/year)<br>30.07.2003 |
| International Patent Classification (IPC) or national classification and IPC<br>B60K28/16, B60K41/20  |   |  |
| Applicant<br>TOYOTA JIDOSHA KABUSHIKI KAISHA et al.   |   |  |
| <p>1. This report is the international preliminary examination report, established by this International Preliminary Examining Authority under Article 35 and transmitted to the applicant according to Article 36.</p> <p>2. This REPORT consists of a total of 5 sheets, including this cover sheet.</p> <p>3. This report is also accompanied by ANNEXES, comprising:</p> <ul style="list-style-type: none"> <li>a. <input type="checkbox"/> <i>(sent to the applicant and to the International Bureau) a total of sheets, as follows:</i> <ul style="list-style-type: none"> <li><input type="checkbox"/> sheets of the description, claims and/or drawings which have been amended and are the basis of this report and/or sheets containing rectifications authorized by this Authority (see Rule 70.16 and Section 607 of the Administrative Instructions).</li> <li><input type="checkbox"/> sheets which supersede earlier sheets, but which this Authority considers contain an amendment that goes beyond the disclosure in the international application as filed, as indicated in item 4 of Box No. I and the Supplemental Box.</li> </ul> </li> <li>b. <input type="checkbox"/> <i>(sent to the International Bureau only) a total of (indicate type and number of electronic carrier(s)) , containing a sequence listing and/or tables related thereto, in computer readable form only, as indicated in the Supplemental Box Relating to Sequence Listing (see Section 802 of the Administrative Instructions).</i></li> </ul> |   |  |
| <p>4. This report contains indications relating to the following items:</p> <ul style="list-style-type: none"> <li><input checked="" type="checkbox"/> Box No. I Basis of the opinion</li> <li><input type="checkbox"/> Box No. II Priority</li> <li><input type="checkbox"/> Box No. III Non-establishment of opinion with regard to novelty, inventive step and industrial applicability</li> <li><input type="checkbox"/> Box No. IV Lack of unity of invention</li> <li><input checked="" type="checkbox"/> Box No. V Reasoned statement under Article 35(2) with regard to novelty, inventive step or industrial applicability; citations and explanations supporting such statement</li> <li><input type="checkbox"/> Box No. VI Certain documents cited</li> <li><input type="checkbox"/> Box No. VII Certain defects in the international application</li> <li><input type="checkbox"/> Box No. VIII Certain observations on the international application</li> </ul>   |   |  |
| Date of submission of the demand<br>25.05.2005  | Date of completion of this report<br>31.10.2005                               |  |
| Name and mailing address of the international preliminary examining authority:<br><br>European Patent Office - Gitschner Str. 103<br>D-10958 Berlin<br>Tel. +49 30 25901 - 0<br>Fax: +49 30 25901 - 840  | Authorized Officer<br><br>Kyriakides, L<br><br>Telephone No. +49 30 25901-526 |  |



# INTERNATIONAL PRELIMINARY REPORT ON PATENTABILITY

International application No.  
PCT/JP2004/011004

## Box No. I Basis of the report

1. With regard to the language, this report is based on the international application in the language in which it was filed, unless otherwise indicated under this item.
  - This report is based on translations from the original language into the following language , which is the language of a translation furnished for the purposes of:
    - international search (under Rules 12.3 and 23.1(b))
    - publication of the international application (under Rule 12.4)
    - international preliminary examination (under Rules 55.2 and/or 55.3)
2. With regard to the elements\* of the international application, this report is based on (*replacement sheets which have been furnished to the receiving Office in response to an invitation under Article 14 are referred to in this report as "originally filed" and are not annexed to this report*):

### Description, Pages

1-48 as originally filed

### Claims, Numbers

1-21 as originally filed

### Drawings, Sheets

1/18-18/18 as originally filed

a sequence listing and/or any related table(s) - see Supplemental Box Relating to Sequence Listing

3.  The amendments have resulted in the cancellation of:
  - the description, pages
  - the claims, Nos.
  - the drawings, sheets/figs
  - the sequence listing (*specify*):
  - any table(s) related to sequence listing (*specify*):
4.  This report has been established as if (some of) the amendments annexed to this report and listed below had not been made, since they have been considered to go beyond the disclosure as filed, as indicated in the Supplemental Box (Rule 70.2(c)).
  - the description, pages
  - the claims, Nos.
  - the drawings, sheets/figs
  - the sequence listing (*specify*):
  - any table(s) related to sequence listing (*specify*):

\* If item 4 applies, some or all of these sheets may be marked "superseded."

**INTERNATIONAL PRELIMINARY REPORT  
ON PATENTABILITY**

International application No.  
PCT/JP2004/011004

**Box No. V Reasoned statement under Article 35(2) with regard to novelty, inventive step or industrial applicability; citations and explanations supporting such statement**

**1. Statement**

|                               |      |        |      |
|-------------------------------|------|--------|------|
| Novelty (N)                   | Yes: | Claims | 1-21 |
|                               | No:  | Claims |      |
| Inventive step (IS)           | Yes: | Claims | 1-21 |
|                               | No:  | Claims |      |
| Industrial applicability (IA) | Yes: | Claims | 1-21 |
|                               | No:  | Claims |      |

**2. Citations and explanations (Rule 70.7):**

**see separate sheet**

**INTERNATIONAL PRELIMINARY  
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International application No.  
**PCT/JP2004/011004**

**Re Item V**

**Reasoned statement with regard to novelty, inventive step or industrial applicability;  
citations and explanations supporting such statement**

**1 INTRODUCTION**

**1.1 Reference is made to the following documents:**

D1: US 2002/084127 A1 (KOTTMANN MATTHIAS ET AL) 4 July 2002 (2002-07-04)  
D2: EP-A-1 270 352 (LAND ROVER) 2 January 2003 (2003-01-02)  
D3: DE 101 14 273 A (MUNNIX PASCAL) 2 October 2002 (2002-10-02)

**1.2 The present application meets the criteria of Article 33(1) PCT, because the subject-matter of claims 1 and 21 does involve an inventive step in the sense of Article 33(3) PCT.**

**2 NOVELTY**

**2.1 Independent claims 1 and 21**

**2.1.1 Document D1, which is considered to represent the most relevant state of the art, discloses**

*A vehicle equipped with a power output device (28) that is capable of outputting a driving force to a drive shaft linked with left and right wheels, said vehicle comprising: a mechanical braking device (18, 20, 22, 24) that is capable of outputting a mechanical braking force to each of the left and right wheels, a slip detection module (100) that detects a slip on each of the left and right wheels caused by wheelspin (par. 0027); and a controller (12) that, in response to detection of a slip caused by spin of one of the left and right wheels by said slip detection module, drives and controls said power output device to restrict the driving force output to the drive shaft (claim 1), OR actuates and controls said mechanical braking device to output a mechanical braking force to the spinning one of the left and right wheels (page 2 par. 24) (claim 1).*

**2.1.2** from which the subject-matter of claim 1 differs by the step of *driving and controlling the power output device to restrict the driving force output to the drive shaft, WHILE actuating and controlling the mechanical braking device to output a mechanical braking force to the spinning one of the left and right wheels.*

**2.1.3** Therefore the subject-matter of the apparatus claim 1 is new

**2.1.4** The same reasoning applies, mutatis mutandis, to the subject-matter of the corresponding

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independent method claim 21 which therefore is also considered new.

**2.2 Independent claims 2 and 20**

**2.2.3** Claims 2-20 are dependent on claim 1 and as such also meet the requirements of the PCT with respect to novelty and inventive step.

**3 INVENTIVE STEP**

**3.1 Independent claims 1 and 21**

**3.1.1** The problem to be solved by the present invention may therefore be regarded as to improve the starting and accelerating performance of the vehicle with left and right wheels running on a road surface with different frictional coefficients.

**3.1.2** The solution to this problem proposed in claim 5 of the present application is considered as involving an inventive step (Article 33(3) PCT) because all of the relevant state of the art documents fail to show a solution as disclosed in claim 1 and/or 21 of the application. The skilled person would therefore also fail to include the above mentioned features in the vehicle described in document D1 in order to solve the problem posed.

**3.2 Dependent claims 2-20**

**3.2.1** Claims 2-20 are dependent on claim 1 and as such also meet the requirements of the PCT with respect to novelty and inventive step.

**4 INDUSTRIAL APPLICABILITY**

**4.1** All claims are industrial applicable in the field of automotive controls.